

ABSTRACT

To eliminate such shortcomings in the prior art that a large-scale semiconductor facility is required, large-sized wiring cannot be produced, and wiring for connection between substrates cannot be formed. Also, to eliminate such shortcomings in a method of using optical fibers for wiring that the wiring is unstable, requires a larger space, and gives rise to a difficulty in management regarding how the optical fibers are connected when the number of optical fibers increases. Further, to eliminate such shortcomings in another method of holding and fixing an optical fiber between polymer sheets that wiring cannot be formed on a plate connecting substrates. In an optical fiber wiring method and apparatus, by feeding an optical fiber, preferably a polymer-made optical fiber, to pass through an adhesive ejecting nozzle having an inner diameter larger than an outer diameter of the optical fiber, the optical fiber coated with the adhesive on a fiber surface is obtained and optical wiring is formed on a substrate by using the adhesive-coated optical fiber. The optical wiring is formed on the substrate by moving the substrate and the nozzle relative to each other, for example, by moving the nozzle with the substrate held fixed, or by moving the substrate with the nozzle held fixed. The adhesive is of the type being hardened with irradiation of an ultraviolet ray. The optical wiring is formed on the substrate by irradiating an ultraviolet ray after the optical fiber coated with the adhesive on the fiber surface has been wired on the substrate.